

Amendments to the Claims:

Claims 1-39 (Canceled)

40. (Previously presented) A method of producing a transgenic mouse whose genome comprises a disruption in an endogenous sulfotransferase gene, the method comprising:

- a. introducing a targeting construct into a mouse embryonic stem cell, wherein the targeting construct disrupts the endogenous sulfotransferase gene;
- b. selecting a mouse embryonic stem cell whose genome comprises a disrupted sulfotransferase gene;
- c. introducing the mouse embryonic stem cell whose genome comprises the disrupted sulfotransferase gene into a blastocyst;
- d. implanting the blastocyst into a pseudopregnant mouse, wherein said pseudopregnant mouse gives birth to a chimeric mouse; and
- e. breeding the chimeric mouse to produce the transgenic mouse,
wherein the transgenic mouse, when homozygous for a disruption in the sulfotransferase gene, lacks expression of functional sulfotransferase and exhibits a behavioral abnormality.

41. (Currently amended) The transgenic mouse method of claim 4053, wherein the transgenicsaid mouse, when homozygous for the disruption in a sulfotransferase gene, exhibits, relative to a wild-type control mouse, aggressive behavior.

42. (Currently amended) The methodtransgenic mouse of claim 4053, wherein the transgenic mouse, when homozygous for the disruption in a sulfotransferase gene, exhibits, relative to a wild-type control mouse, hyperactivity.

43. (Currently amended) The methodtransgenic mouse of claim 4053, wherein the transgenicsaid mouse, when homozygous for the disruption in a sulfotransferase gene, exhibits, relative to a wild-type control mouse, decreased anxiety.

Claims 44-48 (Canceled)

49. (Currently amended) A cell or tissue isolated from the transgenic mouse of claim 4450.

50. (Currently amended) A transgenic mouse whose genome comprises a null comprising a heterozygous disruption in a endogenous sulfotransferase allelegene, wherein said null allele comprises exogenous DNAthe transgenic mouse, upon breeding, produces a transgenic mouse

~~homozygous for a disruption in a sulfotransferase gene, wherein the transgenic mouse when homozygous for the disruption in the sulfotransferase gene lacks production of functional sulfotransferase and exhibits a behavioral abnormality.~~

51. (Canceled)

52. (New) The transgenic mouse of claim 50, wherein said mouse is heterozygous for said null allele.

53. (New) The transgenic mouse of claim 50, wherein said mouse is homozygous for said null allele.

54. (New) The transgenic mouse of claim 53, wherein said mouse exhibits in the liver at least one of the following: patchy pallor of acinar zone 3 hepatocytes, eosinophilic globules with intranuclear invaginations within the cytoplasm of hepatocytes and anisocytosis, anisonucleosis and increased mitotic cellular activity, relative to a wild-type control mouse.

55. (New) The transgenic mouse of claim 53, wherein said mouse exhibits in the Harderian glands and salivary glands, at least one of the following: focal pigment deposition, atrophy and fibrosis.

56. (New) The transgenic mouse of claim 50 wherein said exogenous DNA comprises a gene encoding a selection marker.

57. (New) The transgenic mouse of claim 56 wherein said gene encoding a selection marker is a neomycin resistant gene.